

SYMPOSIUM CC SERVER AND OPERATING SYSTEM REQUIREMENTS

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1 Introduction

1.1 Objectives

The objective of this document is to provide Server and Operating System requirements for the Symposium range of Contact Center Applications. This information summarizes and in some cases, supersedes, information contained in the Installation and Maintenance Guides for each of the Symposium Products. This document can be used as part of a pre-installation analysis, aimed at defining the appropriate server requirements for a specific Symposium product.

This document will provide you with the following information:

- Minimum and Recommended (where possible) hardware specifications.
- Operating System requirements
- 3rd Party Software Guidelines

This document is not intended to be a configuration guide.

1.2 Terminology

For the purposes of this document, the term "Symposium Server Application" is used to generically refer to *any* of the Symposium applications listed in Section 1.3 (Scope) below.

The ability of Symposium Applications to operate on non-Nortel supplied hardware is termed 'Platform Vendor Independence', henceforth referred to as 'PVI'.

1.3 Scope

This document covers the following list of Symposium Server Applications:

- Symposium Call Center Server
- Symposium Express Call Center
- Symposium Web Client
- Symposium Web Center Portal
- Symposium TAPI Service Provider and Symposium TAPI ICM
- Symposium Standby Server
- Symposium Linkplexer
- Symposium Agent
- Symposium co-resident configurations
- Communications Control Toolkit (CCT)

1.4 Target Audience

This document is targeted towards the distributor community but can also be released to end customers if deemed necessary.

This guide will be updated as required to supplement information that may not be in the Customer Documentation. Please ensure you have the latest version of this guide by checking the Nortel Partner Information Center website [6].

1.5 Document Structure

Section 2 of this document defines the general requirements that are applicable to ALL Symposium Server Applications.

Sections 3 and onwards define additional requirements that are associated with a specific Symposium Server Application.

2 General Requirements

All requirements in this section of the document are applicable to the full list of Symposium Server Applications listed in the previous 'Scope' Section.

Symposium Server Applications can be installed on servers that:

- a) Meet the minimum hardware specifications outlined in this document
- b) Are included on Microsoft's Compatibility List for Windows2000 or Windows NT
<http://www.microsoft.com/hwdq/hcl/search.asp>
- c) Meet the OS and 3rd party software guidelines outlined in this document
- d) Meet any other guidelines specified in this document

Important Note: Ensure that the host names of servers conform to the Microsoft naming conventions. Using an Underscore "_" or dot "." in the host name of your server are not supported and can cause Symposium applications errors.

2.1 Third-party Software Requirements

Due to the mission-critical, real-time processing performed by a Symposium Server Application you must not install any other 'application' class software on the server. You may install certain 'utility' class software on the server, providing it conforms to the guidelines listed below.

Application class software generally requires a certain amount of system resources and therefore must not be installed on any server running a Symposium Server Application. The installation of third-party applications may cause a Symposium Server Application to operate outside of the known engineering limits and can therefore create potential unknown system problems (for example, CPU contentions, increased network traffic loading, disk access degradations, and so on).

Certain third-party utility class software applications, such as hardware diagnostics or backup tools, generally require less system resources during the normal operation of a Symposium Server Application and are therefore permitted. Exceptions are utilities such as screen savers, which may cause system problems and degrade performance. Anti-virus software is classified as a utility and is subject to the generic guidelines listed below. Depending on the Symposium Server Application type, there may also be additional anti-virus software guidelines contained in later sections of this document.

2.1.1 Generic Guidelines for utility-class software applications

- During run-time, the utility must not degrade the Symposium Server Application beyond an average percentage of CPU utilization (refer to each specific application section in this document for the recommended maximum CPU utilization level) Furthermore, the utility must not lower the minimum amount of free hard disk space required by Symposium Server Application and the Windows Operating system.
- The utility must not cause any improper software shutdowns or out-of-sequence shutdowns.
- The utility must not administer the Symposium Server Application.
- If the utility has its own database, it must not impact the Symposium Server Application database.

- Disk compression utilities must not be used.
- Memory tweaking utilities (for example, WinRAM Turbo, Memory Zipper, and so on) used to reclaim memory that is unused by Microsoft should not be used.
- The installation or un-installation of the third-party software must not impact/conflict with the Symposium Server Application (for example, it must not cause .DLL conflicts). If such conflicts are discovered, a rebuild of the server may be necessary.
- The implementation personnel must perform tests to ensure these conditions and recommendations are met prior to putting the Symposium Server Application into production. Nortel Networks support personnel may ask for the results of the testing during fault diagnosis. As part of the fault diagnosis process, the distributor or end-user may be asked to remove third-party software.

2.1.2 Additional Guidelines for use of anti-virus software

Nortel Networks acknowledges that some customer's security policies may require the installation of anti-virus software on the Application server.

Nortel Networks has selected a representative sample of anti-virus software packages and has a policy of performing where possible a validation of these products to ensure co-residency with our Server Application products. The current suite of anti-virus products that are used as part of this policy are as follows:

- McAfee Netshield
- NAV corporate edition
- eTrust Anti-virus

Obviously this selection is intended to be a representative sample and will vary over time.

The following generic guidelines for the use of anti-virus software:

- The Symposium Server Application must be installed before installing the anti-virus software. When the anti-virus software is installed, it is the implementation personnel's responsibility to perform testing with the anti-virus software, in accordance with the guidelines for utility-class guidelines outlined above.
- During PEP installations on both the client and server, all anti-virus functionality should be disabled (for example, firewalls, [passive] scanning, auto updates, and so on), and should not start up automatically until the entire Symposium Server Application installation procedure is complete. Re-enable anti-virus functionality afterwards, as required.
- Virus scans must be set to run during off-peak hours, and not to start on the hour:
- Infected file quarantine policy on the server and client. The anti-virus software must not be configured to deal automatically with suspected infected files. In the event of infected files being located, do not attempt to replace or remove them. Contact your local Nortel Networks support representative for assistance in determining if the files are part of the Symposium Server Application or a critical system file.
- You must not connect a Symposium Server Application platform directly to the Internet to download virus definitions or updated files. Furthermore, Nortel Networks recommends that you do not use a Symposium Application client PC to connect to the Internet. Instead, you must download virus definitions and updated files to another location on the customer

network, and manually load them from this interim location onto the Symposium Server Application platform.

- This is the same recommended procedure for downloading Symposium Application PEP's. This method limits access to the Internet, and thus reduces the risk of downloading infected files.
- Nortel Networks recommends that you scan all PEP files, CD-ROMs, and floppy disks prior to installation or uploading to the server. This practice minimizes any exposure to infected files from outside sources.
- Capacity considerations: Customers must note that running virus scan software can place an additional load on a Symposium Server Application platform. It is the implementation personnel's responsibility to run the performance monitor tool on the server to gauge CPU utilization. If the anti-virus software scan causes the platform average CPU utilization to exceed the recommended percentage for longer than 20 minutes, then the anti-virus software must not be loaded onto the Symposium Server Application platform.

Notes:

- Nortel Networks does not provide support on the configuration of anti-virus software, but will endeavor to offer guidance where possible. Questions or problems on anti-virus software should be directed to the appropriate vendor.
- If performance or functionality issues are raised to Nortel Networks support personnel, as part of the fault diagnosis process, the customer/distributor may be asked to remove third-party utility software or anti-virus software.

2.2 Operating System Updates

2.2.1 Patching

Given the number of operating system security patches and the complexity inherent in any network, Nortel Networks recommends that you create a systematic and accountable process for identifying and applying patches. To help create such a process, you can follow a series of best practices guidelines, as documented in the National Institute of Standards and Technology (NIST) Special Bulletin 800-40, Procedures for Handling Security Patches. This bulletin suggests that if an organization does not have a centralized group to coordinate the storage, evaluation, and chronicling of security patches into a library, then system administrators or the contact center administrator must fulfill this role. In addition to these guidelines, whenever possible, Nortel Networks recommends that you follow Microsoft's recommendations regarding newly discovered vulnerabilities and that you promptly install any security patches issued by Microsoft.

Whenever possible, Nortel Networks incorporates the latest OS security recommendations and patches in an integrated solutions testing strategy during each test cycle. However, due to the urgent nature of security patches when vulnerabilities are discovered, Nortel Networks recommends that customers follow Microsoft's guidelines as they are issued, including any Microsoft installation procedures and security patch rollback processes that may be in place.

Finally, you must make a full system backup before patching the system to ensure that a rollback is possible, if required.

Note: If a Symposium Server Application does not function properly after you apply a Microsoft security patch, then you must remove the patch and revert to the previous version of the

application (from the backup you made before applying the patch). For added security, always check to see if Nortel Networks has already verified the Microsoft patch for its compatibility with Symposium.

This information is maintained in Nortel's "Symposium Service Packs and Security Hotfixes Compatibility List" [5] located on the Partner Information Center website. This document can be found in the following location:

Products / Symposium Call Center Server 4.2 / Tools

2.2.2 Service Packs

Nortel has a policy is to implement co-residency testing of all new Operating Service Packs for compatibility with our suite of Symposium Server Applications as soon as they are available. In practice, because a Service Pack may contain a significant amount of new content, Nortel requires that customers must wait until Nortel has completed compatibility testing before applying the Service Pack. Note that OS Service Packs are typically tested with the latest Symposium Application SU and therefore an upgrade to a new Service Pack could also necessitate an upgrade to the latest Nortel SU.

Before loading a new Service Pack it is imperative that a full system backup is completed (to allow for system rollback as in the patching scenario). Service Pack compatibility for all Symposium Server Application's is maintained in Nortel's "Symposium Service Packs and Security Hotfixes Compatibility List" [5] located on the Partner Information Center website.

Important Note

Once Nortel has completed compatibility testing with a specific Windows Service Pack, this version of the Service Pack automatically becomes the recommended minimum version that should be used with the Symposium Server Application. As stated already, please refer to [5] for details of what version of Service Pack has been tested should be used with a particular Symposium Server Application.

Reference [5] is updated frequently to reflect the most current situation in relation to Service Pack Compatibility.

2.3 Hardware Requirements

2.3.1 RAID (Redundant Array of Disks)

Nortel Networks strongly recommends that all Servers contain a RAID-1 (type 1) controller. The Redundant Array of Independent Disks (RAID) technology provides disk data redundancy as well as error detection and correction. RAID 1 is the solution highly recommended by Nortel Networks as this allows maintenance personnel extra flexibility in providing technical support. Software-RAID (as offered by Microsoft) is not supported.

2.3.2 Uninterruptible Power Supply (UPS)

The use of an Uninterruptible Power Supply (UPS) with the Server is permitted. A UPS provides the following benefits:

- Reduction in data loss – A UPS shuts down the server gracefully if an interruption in AC power occurs. A graceful shutdown prevents data corruption and reduces the risk of data loss.

- Reduction in power dips and spikes – The UPS regulates AC power supplied to the server.

Note: Data backups that are running at the time of shutdown are unusable.

2.3.2.1 UPS Requirements

- Provides at least 10 minutes of power to stop all services and shut down the server.
- Physically fits within the workplace.
- Has minimal environmental impact.
- Applies power to the server when line voltage reaches a stable state.
- If the server has been down for a long time, recharges before powering up the server.
- Is compatible with Operating System running on the Server.
- Meets all local regulatory requirements. Note: For the European market, the UPS must generate a pure sine wave AC waveform.
- Has hot-swappable batteries. Note: Replacement or capacity upgrades of the batteries must not interrupt service.
- Connects to the server through a serial port (not COM1 or COM2) on the server platform or through a network card, depending on the implementation.
- Does not affect the Symposium Server Application software. UPS software must not replace software or drivers installed on the server with different versions. Note: Install only the basic software functions necessary for UPS operation. Do not install advanced features, as they can impact the Symposium Call Center Server software.

Note: If you install Smart UPS software on the server, it must conform to the guidelines listed in this document for third-party utilities. The documentation, testing, and support of Server shutdown and startup with UPS software must be carried out by the provider of the UPS solution.

2.4 Technical Support

All hardware diagnostics are the responsibility of the hardware vendor. You should always check with the manufacturer's instructions and recommendations before you perform any hardware-related procedure.

It is the Distributor / End User's responsibility to verify their selected server. This verification should include making sure the PVI system conforms to specifications as listed in this guide, installing the Operating System and ensuring it is functional (i.e. boots up correctly, is able to connect to the network etc), before installing and configuring a Symposium Application. The distributor / End User should make an effort to rule out hardware faults before escalating issues into Nortel Networks. During the course of problem diagnosis, Nortel Networks GNTS may ask for test reports carried out on PVI hardware, or it may be necessary to request the removal of certain software utilities if it is deemed necessary as part of the fault investigation process.

Nortel Networks provides support for installation and configuration of a Symposium Server Application and on questions concerning the configuration of the Operating System and pcAnywhere.

3 SCCS 4.2 & SCCS 5.0

3.1 Introduction

This section covers the requirements for both SCCS 4.2 and SCCS 5.0. Unless otherwise stated all the requirements are applicable to both versions of SCCS. Note that at the time of issue of this document, SCCS 5.0 is pre-General Availability. As NCC (Network Control Center) is a keycoded version of SCCS, unless otherwise stated all of the requirements listed in this section are equally applicable to NCC.

3.2 Hardware Requirements

The table below provides the minimum and recommended Hardware requirements for both SCCS 4.2 and SCCS 5.0.

WARNING

A detailed analysis of your co-resident Call Center's capacity requirements should always be carried out using the Symposium Capacity Tool before deciding on the exact specification of your chosen PVI server, in terms of CPU speed, RAM size, disk space etc. The Symposium Capacity Tool is a standalone software utility that can be downloaded from the Partner Information Center at the following location:

Products / Symposium Call Center Server 5.0 / Tools

Also please refer to the Symposium Planning and Engineering guide [8] which contains more information about how to engineer a Call Center.

It is imperative that you understand the limitations associated with using the minimum and recommended Server Specifications listed in table 8.1.

Supported Minimum: This is the absolute minimum platform onto which the Software can be loaded, and in many cases may not be sufficient for your Contact Center Requirements. The capacity tool must be used to validate the Server requirements.

Recommended Minimum for new Server: For new server installations, this is the recommended minimum specification. Note that in many cases it may not meet your contact center requirements. The capacity tool must be used to validate the Server requirements.

Hardware Item (Note 1)	Supported Minimum (For SCCS 5.0 see Note 7)	Recommended Min Requirements for new Server (Note 3)	Additional Information
CPU	SCCS 4.2: Intel-based CPU, Pentium II 350 Mhz SCCS 5.0: Intel-based CPU, Pentium III 733 Mhz	Intel-based CPU, XEON 2 GHz	- Supported processors include Pentium II (SCCS 4.2 only), Pentium III Xeon, Pentium IV, Intel Xeon and Intel Xeon DP. Dual CPU machines are supported. - SCCS 4.2: Quad CPU not supported. - SCCS 5.0: Quad CPU is supported, including Xeon MP - Non-supported processors include: Intel Celeron and Intel Itanium (IA 64) - AMD Processors are not supported
RAM	SCCS 4.2: < 600 agents, 256 Mbytes > 600 Agents, 512 Mbytes. SCCS 5.0: 512 Mbytes of RAM	1Gbyte of RAM	Recommended Paging file size 1.5 *RAM up to a maximum file size of 2GBytes.
Hard Disk Space	SCCS 4.2: 8 GB physical disk space SCCS 5.0: 20 GB physical disk space (See Note 6)	40 GB logical disk space (80 GB physical disk space with RAID-1)	RAID-1 is recommended for all disks on the shared SCSI bus to eliminate disk drives as a potential single source for hardware failures.
Hard Disk Partitioning	1 physical drive	Separate drives for the OS / SCCS application and the database partitions	Separate physical disks provides more reliable and ease of recovery in case of disk failure.
Hard Disk Type	SCSI Bus for Hard drives	SCSI Bus for Hard drives	IDE drives not supported. SAN (Storage Area Network) configurations not supported.
Hard Disk Speed	hard drive speed of 7200 rpm from manufacturer's specification	Hard drive speed of >7200 RPM	
Floppy Drive	One floppy drive	One Floppy Drive	Drive letter must be A.
CD ROM	One CD-ROM drive	One DVD-ROM Drive	- Drive letter must be E - Minimum speed is 24X
Serial Ports (Note 2)	One Serial Port (For Modem Access) or USB Port (If using USB Modem) See Note 4.	One Serial Port (For Modem Access) or USB Port (If using USB Modem) See Note 4.	Additional serial port will be required if you wish to use Access Link for Meridian Mail or a serial UPS. You must use COM2 for the Access Link. Also a serial port is an option for security device connectivity (See note 5)
Parallel Port	Not required if SCCS is connecting to M1. For SCCS 5.0, see Note 5.	Not required if SCCS is connecting to M1 For SCCS 5.0, see Note 5	See Note 5.
Network Interface	2 Network Interface cards (NCC only requires 1 Network Interface card)	2 Network Interface Cards (NCC only requires 1 Network Interface card)	ELAN must be 10/100 Mbps Ethernet Recommend CLAN should be 100Mbps Ethernet. SCCS 4.2:CLAN can be Ethernet or Token Ring SCCS 5.0: Only Ethernet supported
Video Card	One video card and monitor	Video Card And Monitor	800x600 minimum resolution
Keyboard	One keyboard	Keyboard	
Mouse	One Mouse	Mouse	
Modem	One external modem	External Modem	33.6 kbits/sec minimum, compatible with the US Robotics Sportster 33.6 modem, for remote technical support. For USB modems See Note 4.
Backup/Restore	Backup system for database backup: can be either tape drive or remote directory	Backup System For Database Backup: Can Be Either Tape Drive Or Remote Directory	For the tape drive option, the drive must be large enough to hold all the backup data for the complete database on a single tape. Hardware compression techniques can be used if necessary

Table 3.1: SCCS 4.2 & 5.0 Minimum and Recommended Hardware Requirements

Symposium PVI Guide

Note 1: All hardware devices must be on the Microsoft Hardware Compatibility List for Windows 2000 Server (or Windows 2003 for SCCS Feature Pack 1). For a complete list of compatible hardware devices, see the Microsoft web site.

Note 2: For COM1, the base I/O Port Address must be set to 3F8, and the IRQ must be set to 4. If you configure additional hardware on your server, such as COM ports 3 and 4, ensure that it is configured correctly (for instance, make sure that IRQ's do not conflict with existing IRQ's). Any further troubleshooting and hardware diagnostics are the responsibility of the hardware vendor.

Note 3: As already stated, a detailed analysis of your Call Center's capacity requirements should always be carried out using the Symposium Capacity Tool. It is likely that for larger Call Centers this server specification may not be sufficient.

Note 4: USB Modems are only supported on Symposium Call Center Server 4.2 SU09 or later, and all versions of SCCS 5.0.

Note 5: SCCS 4.2 is only supported on M1 therefore a parallel port is not a requirement for security device connectivity. SCCS 5.0 is supported on both M1 and DMS and for the DMS version a security device is required. The default connectivity for this device is a parallel port but there are also options available to connect the security device to the SCCS server via serial port or USB.

Note 6: Refer to Disk Partitioning Requirements for more detail.

Note 7: The SCCS 5.0 Server minimum Server requirement is designed to handle a Call Center size of up to (but no higher than):

- 400 logged on agents
- Maximum Call rate of 10,000 calls/hour

Note that this reflects a Contact Center size that should not be exceeded for the minimum Server requirement. As always, the capacity Tool should be used for a more detailed analysis.

3.2.1 CPU Utilization

For optimal performance, the average CPU utilization should not exceed 50 percent over at least a 15-minute time interval.

3.2.2 RAID Controller

For RAID requirements, please refer to the general requirements contained in section 2 of this document.

3.2.2.1 Additional requirements for Symposium Call Center Server

Hardware Assisted Software Mirroring (HASM, as offered by Stratus) is supported on Symposium Call Center Server, refer to [7] for more details on this implementation.

It is also possible to implement RAID 5 with Symposium Call Center Server, however RAID 1 is the solution highly recommended by Nortel Networks as this allows maintenance personnel extra flexibility in providing technical support. Other RAID levels are not supported. Any RAID-specific issues must be addressed by the RAID vendor.

3.2.3 Uninterruptible Power Supply (UPS)

For Uninterruptible Power Supply (UPS) requirements, please refer to the general requirements contained in section 2 of this document.

3.2.4 High Availability

In response to customer demand for improved hardware platform availability in the Symposium Call Center Server contact centers, Nortel Networks and Stratus entered into a partnership to have the Stratus ftServer 3300 tested in Nortel Networks secure high capacity lab environment by the Nortel Networks compatibility engineering team.

As a result, the Stratus ftServer's 3220 and 3300 have been awarded a worldwide Nortel Networks Compatible Product designation after successful compatibility testing with Symposium Call Center Server, including the Network Control Center Option (NCC). The ftServer continues to operate at full capacity in the event of any ftServer component failure, thus

for the customer there is no interruption in call processing by the Symposium Call Center Server Release, no lost data, and no slowdown in performance.

Note: For additional information regarding installation of Symposium Call Center Server on a Stratus fitServer 3220 or 3300, you should also refer to the Stratus Technical Reference, which is available on the Nortel Networks Partner Information Center at the following location:

Products / Symposium Call Center Server 4.2 / Distributor Technical Reference

Nortel Networks does not support other high availability platforms with Symposium Call Center Server until and unless such platforms have successfully completed Compatibility Testing through the Nortel Networks Developer Program.

3.3 Disk Partitioning Requirements

The table below provides detailed information on partitioning a server to meet the requirements of Platform Vendor Independence. The minimum and recommended partition sizes are provided in the following table:

Drive Letter	Minimum Size	Recommended Size	Maximum Size	Notes
A:	1.44Mbytes	1.44Mbytes	N/A	Floppy Drive A:
C:	SCCS 4.2: 2 Gbytes SCCS 5.0 Windows 2000: 2 Gbytes + 1.5 *RAM SCCS 5.0 on Windows 2003 6 Gbytes: See Note 1	SCCS 4.2 & SCCS 5.0 on Windows 2000: > 4 Gbytes SCCS 5.0 on Windows 2003: > 12 Gbytes See Note 1	N/A (Subject to Operating System limitation only)	NTFS partition on disk 0. This must be partitioned as the Primary partition. The Windows operating system and pcAnywhere are installed here.
D:	SCCS 4.2 & SCCS 5.0 on Windows 2000: 4 Gbytes SCCS 5.0 on Windows 2003: 4 Gbytes + Paging File size (if paging file located on D: drive) See Note 1	SCCS 4.2 & SCCS 5.0 on Windows 2000: > 8 Gbytes SCCS 5.0 on Windows 2003: > 8 Gbytes See Note 1	N/A (Subject to Operating System limitation only)	Additional NTFS partition on disk 0 or an NTFS partition on a different disk. This must be partitioned as a Logical drive within an Extended partition, since this partition is not used for booting. Symposium Call Center Server is installed here.
E:	N/A	N/A	N/A	CD-ROM or DVD-ROM Drive
F: to U:	4 Gbytes	Dependent on Capacity Requirements	16 Gbytes (16 384 Mbytes)	Drive F and any additional drives are used to store the database.

Note 1: For Windows 2003, the minimum C: drive requirement has been increased to 6Gbyte due to additional requirements generated by SP1. In many cases, this 6Gbyte may still not be enough to also accommodate the Paging File, which is dependant on the RAM size, therefore it may be necessary to relocate the Paging File onto a different partition if there are space constraints on C: partition. If the Paging File is moved to D: this will therefore increase the minimum size requirement for D: (Alternatively the Paging file could be moved to another partition if this option is available). Future updates to Windows 2003 may generate additional disk size increases therefore it is strongly recommended to use the recommended sizes for both C: & D: shown above where possible.

Note that the D: partition is also used to store log and trace files and therefore this has also driven a requirement to increase it's recommended size based on field experience. Thus if possible it is strongly advised use the 8Gbyte recommendation for D: partition.

Table 3.2: SCCS 4.2 & 5.0 Disk Partitioning Requirements

Refer to the SCCS Installation and Maintenance Guide [1] for additional information regarding disk partitioning.

Note the following for precise size definitions:

1 Kbyte = 1024 bytes

1 Mbyte = 1024Kbytes = 1,048,576 bytes

1 Gbyte = 1024Mbytes = 1,048,576 Kbytes = 1,073,741,824 bytes.

3.4 Operating System Requirements

The tables below provide the OS compatibility for SCCS 4.2 and SCCS 5.0 respectively:

OS type	Internationalized versions supported	Minimum Service Pack Required
Windows 2000 Server	- English - Japanese (Note 1) - Traditional Chinese (Note 1)	See reference [5]. The latest SP tested by Nortel is the recommended minimum.
Windows 2000 Advanced	As per Windows 2000 Server	
Windows 2000 Datacenter	Not Supported	
Windows 2000 Professional	Not Supported	

Table 3.3: SCCS 4.2 Operating System Support

OS type	Internationalized versions supported	Minimum Service Pack Required
Windows 2000 Server	- English - Japanese (Note 1) - Traditional Chinese (Note 1)	See reference [5]. The latest SP tested by Nortel is the recommended minimum.
Windows 2000 Advanced	As per Windows 2000 Server	
Windows 2000 Datacenter	Not Supported	
Windows 2000 Professional	Not Supported	
Windows 2003 Server Standard Edition (Only for SCCS 5.0 Feature Pack 1 or later)	- English - Japanese - Traditional Chinese	See reference [5]. The latest SP tested by Nortel is the recommended minimum.
Windows 2003 Server Enterprise Edition (Only for SCCS 5.0 Feature Pack 1 or later)	- English - Japanese - Traditional Chinese	
Windows 2003 Server Datacenter Edition	Not Supported	N/A
Windows 2003 Server Web Edition	Not Supported	

Table 3.4: SCCS 5.0 Operating System Support

Note 1: On SCCS 4.2 Traditional Chinese and Japanese requires a specific PEP to account for double byte characters.

3.4.1 OS installation and Configuration

Symposium Call Center Server runs on the Windows Components installed by default in Windows 2000 Server as a stand-alone server, with the following exceptions:

- The Simple Network Management Protocol (SNMP) service must be installed on your server. This allows you to use an SNMP management system for remote monitoring. This service is not installed by default, so you must select it while installing or configuring the operating system.
- The Internet Information Service (IIS) must not be installed. If it is installed, it will degrade the server's performance. This service is installed by default, so you must remove it while installing or configuring the operating system.

Do not install any additional services on your server that are not installed by default or listed above

Refer to the SCCS Security Guide [4] for detailed guidelines on OS configuration, available on the Partner Information Center website. The specific location of the security document is as follows:

Products) / Symposium Call Center Server 4.2 / Technical Guides and Reference

3.5 Third-party Software: SCCS-specific requirements

3.5.1 Third-party backup software

There are 2 types of backup on Symposium Call Center Server:

- Full (offline) Backup
- Database (online) Backup

Third-party backup software is used *only* for full (offline) backup. To create a full backup, you must use a third-party backup utility, for example Windows backup. You should refer to the relevant third-party documentation for information on the full backup procedure, and to the Symposium Call Center Server Installation and Maintenance Guide for information on procedures that must be completed before beginning a full backup. If you wish to use a third party backup utility, it should be in accordance with the general third party software guidelines specified in section 2 of this document. In addition it should be noted that all SCCS services, including the Sybase database SQL server must be shut down before performing a full backup. Even though some 3rd party backup utilities can provide an online backup of all files including the Sybase database, SCCS does not support an online backup from these 3rd party backup utilities.

You must use the utility included with Symposium Call Center Server to perform all other database backups due to proprietary functions called upon during the backup routine. Refer to the Symposium Call Center Server Installation and Maintenance Guide, Chapter 14 Backing Up Data. Nortel Networks recommends performing a daily database backup.

3.5.2 Anti-Virus

Several maintenance tasks are automatically activated on Symposium Call Center Server at midnight, so an off-midnight time virus scans must be ensured. Similarly, active virus scans must be disabled when running diagnostic traces or logs on the server.

For SCCS, Nortel Networks recommends that you exclude from scanning the following files:

```
F:\Nortel\Database\  
<additional database drive>:\Nortel\Database\
```

In addition, the following file must be excluded:

```
D:\NortelICCM\BIN\Tools2.exe
```

Note: You will encounter file access errors in the Scan Activity log if you do not exclude this latter file from scanning.

Simple Network Management Protocol (SNMP) alerting on virus confirmation: At this time, Nortel Networks has not tested this feature and is unable to ascertain any potential impact on Symposium Call Center Server. Nortel Networks does not recommend, therefore, that you activate this feature.

3.5.3 PcAnywhere

Nortel Networks requires that pcAnywhere be installed on the Symposium Call Center Server to provide remote support. A version of PcAnywhere host-only software is shipped with the Symposium Call center Server. Compatibility of pcAnywhere versions and the Symposium Call Center Server release are provided in the table below:

PcAnywhere Host-Only version	SCCS version	PcAnywhere Client compatibility
10.5	4.2	11, 10.x, 9.x, 8.x
11.01	5.0	11.01, 10.x, 9.x

Table 3.5: *pcAnywhere and SCCS compatibility*

Note that Nortel does not supply the pcAnywhere Client with its host-only version of pcAnywhere.

3.6 Platform Compliance Check Utility

To check whether a particular server meets the basic requirements for Platform Vendor Independence, the Platform Compliance Check utility should be run on the server after the operating system is installed and the drives are partitioned. This utility is included on the Server Application CD containing the Symposium Call Center Server software. It generates warnings and suggestions when the server under test does not satisfy the minimum or suggested requirement.

3.7 PVI servers tested in Nortel Networks facilities

As guidance, Nortel has performed tests on the following servers from major platform vendors:

- HP (Netserver LH4, e800)
- Compaq Proliant (DL380, ML370, ML350)
- IBM (xSeries x240, x235, x250)

- DELL (PowerEdge 2400, 4600)

Although the specifications and components of the servers tested may change throughout their life cycle, Nortel will not be performing on-going testing of these platforms. Nortel Networks' testing did not include any vendor-specific utilities or diagnostic tools that may be delivered with the above platforms.

The following platforms have successfully passed compatibility testing with Symposium Call Center Server through the Nortel Developer Partner program.

- IBM's eServer xSeries 240/250
- Stratus ftServer 3220
- Stratus ftServer 3300